

NEW JAPANESE FUNGI

NOTES AND TRANSLATIONS—VI

TYÔZABURÔ TANAKA

UNCINULA CURVISPORA K. Hara sp. nov. (in litt.).

Uncinula septata Salm. var. *curvispora* K. Hara var. nov. in Dainippon Sanrin Kwaihô (Journ. Forestry Asso. Japan) Tôkyô, 392: 62. T. 4, vii Jul. 1915. (Japanese.)

Spots obsolete, hypophyllous; mycelia spreading in thin film-like overgrowth, fugacious; perithecia punctiform, scattered, flat-discoidal or conspicuously compressed into scale form, 170–220 μ (aver. 200 μ) diam., black; perithecial wall membranaceous, cells small and irregular, sometimes more or less radiating, 4–8 μ wide; appendages numerous, 200–300 altogether, filiform, simple, smooth, thin-walled, 35–200 μ long, 4–11 septate throughout, the basal half yellowish-brown, 6–7 μ across, gradually narrowed toward the apex, 2–2.5 μ across near the hyaline ends, apex coiled spirally; asci 3–5 to one perithecium, ellipsoid or ovoid, rounded at the apex, beaked, below, walls rather thick but brittle, 65–75 \times 37–50 μ ; ascospores 4–5, ellipsoid, ovoid, or ovoid-reniform, both ends rounded, yellowish, unicellular, granular inside, 28–35 \times 12–15 rarely 45 \times 18 μ .

On *Fagus sylvatica* var. *Sieboldi*.

Locality and distribution: Not given.

Notes: In a letter from Mr. Hara, received shortly before by the writer, a very peculiar habit of this fungus is described, which caused him to determine to raise this as a species. He found that the perithecia at maturity behaved always to turn over on their heads holding the substratum with their appendages exactly like the perithecia of *Phyllactinia corylea* do with the second appendages. He proposes a new subgenus *Asterothecia* to which the species belong, characterized by another noteworthy peculiar form of flattened perithecia.

UNCINULA GENICULATA Gerard var. *carpinicola* K. Hara var. nov. in Dainippon Sanrin Kwaihô (Journ. Forestry Assoc. Japan) Tôkyô, no. 392, p. 62, 63, 1 text fig. on p. 64 (to the right) T. 4, vii, Jul. 1915. (Japanese.)

Amphigenous; mycelia persistent or evanescent, thin, filmy; hyphae filamentous, colorless, branching, septate, $3-4\mu$ across; perithecia gregarious or scattered, spheroid or depressed-spheroid, $70-100\mu$ diam.; perithecial walls membranaceous, dark-brown, composed of cells $10-18\mu$ wide; appendages $16-20$ altogether, delicate, filiform, straight or inflexed about the middle, continuous, glabrous, equally thickened, spirally helicoid at the apex, $150-440 \times 6-7\mu$; asci $6-8$ in one perithecium, ellipsoid or ovoid, unicellular, hyaline, one or two nucleate at the middle, $15-20 \times 9-11\mu$.

On *Carpinus* sp.

Locality and distribution: Not given.

Figures (woodcut) give the shape of appendages.

Differs from the type by having (1) amphigenous and much smaller perithecia, (2) very long appendages measuring 1.5 to 4 times as long as the perithecium and in numbers and dimensions of asci and ascospores.

UNCINULA NECATOR (Schw.) Burr. var. *Actinidiae* K. Hara comb. nov. in Dainippon Sanrin Kwaihô (Journ. Forestry Assoc. Japan) Tôkyô, no. 392, p. 63-64, 1 text fig. on p. 64 (middle). T. 4, vii, Jul. 1915. (Japanese.)

U. Actinidiae Miyabe ex Salm. Monogr. Eris. 101. 1900 (nom. nud.).

Spots amphigenous, white or cinereous, irregular, somewhat pulverulent; mycelia thin, effused, persistent or evanescent; hyphae filamentous, branched, septate, $3-4\mu$ diam.; perithecia amphigenous, scattered or gregarious, spheroid or complanate-spheroid, $80-120\mu$, average 100μ diam.; cells forming perithecial wall $10-20\mu$, rarely 23μ wide, dark-brown; appendages $10-23$, linear, simple or rarely forked, $3-7$ septate or continuous, colorless above, usually $6-8\mu$ across, strongly helicoid at the apex, swollen at the base with diam. $9-13\mu$, total length $100-250\mu$, commonly, 200μ ; asci $4-6$, ovoid, ellipsoid or spheroid, beakless or occasionally beaked, $50-60 \times 35-40\mu$, spherical ones 50μ diam.; ascospores $4-6$, hyaline, ellipsoid or ovoid, $18-23 \times 10-13\mu$.

On *Actinidia polygama* and *Actinidia Kolomikta*.

Locality and distribution: Not given.

Illustrations (woodcut) gives appendages, ascus, and ascospores. In comparison, several appendages of *U. necator* from wine grape are figured to the left hand.

Note: Salmon states that the occurrence of this fungus on *Actinidia* in Japan suggests that native locality of grape mildew disease in the Orient (Monogr. Erisiph. 1900, p. 101), but Hara considers there is evidently a considerable morphological difference between this and the typical *U. necator*, the former being characterized by short, stout, subrigid appendages, with distinct swollen bases, and by typically beakless asci.

MICROSPHAERA ALNI (Wallr.) Salm. forma *Quercus-glanduliferae* K. Hara forma nov. in Dainippon Sanrin Kwaihô (Journ. Forestry Assoc. Japan) Tôkyô, 392: 64 Jul. 1915. (Japaneses.)

Appendages once branch dichotomously about the middle. Other characters same as type.

On *Quercus glandulifera*.

Locality and distribution not given.

MACROPHOMA CORCHORI Sawada sp. nov. in Taiwan Nôjihô (Formosan Agric. Review) Taihoku, 120: 868-871. T. 5, xi, Nov. 1916. (Japanese.)

Spots indefinite; mycelia corticolous or lignicolous, occasionally formed in medulla, colorless; hyphae aseptate, branching, 3-8 μ across, freely passing through the host cells; pycnidia sub-epidermal, punctiform, black, with ostiola erumpent, spheroid, depressed-spheroid or ovoid, often sub-confluent, 98-225 \times 89-275 μ ; cells forming perithecial wall multiserial, black; ostiola with round openings 15 μ in diam.; conidiophores numerous, densely coarctate, cylindric, somewhat tapering toward the apex, simple, straight or slightly curved, continuous, hyaline, 10-14 \times 2.5-3.5 μ , terminated by a single pycnospor; pycnospor ovoid-oblong, oblong-ellipsoid or short-clavate, rounded at the apex, obuse at the base, straight or slightly curved, smooth, unicellular, finely guttulate, hyaline, 16-32 \times 7-10 μ .

On *Corchorus capsularis* (jute).

Locality: Formosa (widely distributed).

Notes: The diseases of jute have not yet been well studied by pathologists even though the plant is so important as a source of textile fiber. Sawada states that this dieback disease is one of the most devastating jute diseases in Formosa and the annual loss is sometimes recorded as 30-40% of the total crop. The only remedy for this is said to be to avoid an insufficient supply of potash in the soil, and Bordeaux mixture was shown to be no protection against the disease.